

Chapter 1 : Sudden stop (economics) - Wikipedia

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On the empirics of sudden stops: Research Department Working Papers ; Includes bibliographical references. Washington, DC The views and interpretations in this document are those of the authors and should not be attributed to the Inter-American Development Bank, or to any individual acting on its behalf. To obtain a complete list of RES publications, and read or download them please visit our web site at: Sudden Stops seem to come in bunches, grouping together countries that are different in many respects. However, countries are similar in that they remain vulnerable to large RER fluctuations. Openness, understood as a large supply of tradable goods that reduces leverage over the current account deficit, in combination with DLD, is a key determinant of the probability of Sudden Stops. The relationship between Openness and DLD in the determination of the probability of Sudden Stops is highly non-linear, implying that the interaction of high current account leverage and high dollarization may be a dangerous cocktail. F31, F32, F34, F41 Keywords: We also wish to thank Walter Sosa for substantive technical advice and Rudy Loo-Kung for superb research assistance. The usual caveats apply. Introduction The sequence of financial crises that started with the so-called Tequila crisis in Mexico in strongly suggests that these phenomena cannot simply be rationalized in terms of advanced country business cycle models. More is at stake here. In particular, these episodes are associated with a sharp contraction of international capital flows, or Sudden Stop, which may by itself have triggered the ensuing disruption. Sudden Stops are associated with large depreciations and major financial disruptions, leading to significantly lower rates of return, investment and growth. This is the point of view that will be elaborated on and subjected to empirical analysis in the present paper. For starters, we would like to say a few words on alternative explanations of deep financial crises in Emerging Market economies EMs and give an intuitive presentation of the approach pursued in this paper. Thus, there comes a time when lenders stop lending, forcing a major domestic adjustment. This explanation is very appealing for the s Debt Crisis in Latin America, but finds little support in Asia. Moreover, debt levels in EMs are comparable to if not significantly lower than in advanced countries e. Ardent believers in the fiscal view may not be entirely convinced by these observations, because during a financial crisis, the country as a whole, and the government in particular, lose access to international capital markets. The most outstanding such episode was associated with the Russian 5 August crisis, in which practically all EMs suffered serious Sudden Stops and an increase in country risk premiums. As a result, attention shifted to other variables. It did not take long for professional opinion to identify soft pegs as the likely culprit. The Soft Peg view is that crisis countries engaged in unsustainable exchange rate pegs, which they were reluctant to abandon in a timely fashion, and only did so when hit by a balance-of-payments crisis. This is an eminently sensible argument, but it falls short of providing an explanation for the ensuing real meltdown collapse in output and employment, for instance. Thus, our criticism follows the same lines that we have just utilized to question the relevance of the fiscal view, and it need not be repeated. In particular, we will zero in on shocks that are reflected in large changes in the real exchange rate RER , i. The RER is a fundamental relative price that cuts across the fabric of the whole economy and involves a large variety of non-tradable goods. Large variety, in turn, militates against the existence of effective state-contingent markets e. There is, of course, nothing special about EMs in this respect. Moreover, the fiscal view does offer a clear explanation of why fiscal adjustment which typically does not exceed 4 percent of GDP should result in major economic disruption. This approach highlights a fundamental element of crisis that will prove to be a key determinant in our empirical findings, yet we emphasize the valuation effects on contingent liabilities in the event that a Sudden Stop materializes, and do not necessarily consider crises to be inevitable or fully expected events, as would be the case in the Burnside-Eichenbaum-Rebelo framework. In what follows we focus on domestic liability dollarization. This effect is particularly relevant because it may trigger substantial uncertainty about the solvency of the banking system as loans become non-performing, sometimes leading to bank runs in expectation of bank bankruptcies, which, in turn, almost inevitably affect the payments system and cause disruption in transactions and output.

Thus, one could conjecture that real devaluations are particularly dangerous after a period in which there have been significant capital inflows like the period from to in EMs. The next section will present a simple model that helps to endogenize the RER. It should be intuitive, however, that a Sudden Stop, being a sizable cut in credit, will bring about a fall in aggregate demand and, consequently, a possibly large increase in the RER. Thus, a Sudden Stop may sow the seeds of a self-fulfilling crisis. This is the main line that will be pursued in the paper. However, it will be argued that equilibrium-multiplicity is not required in order to rationalize the existence of Sudden Stops. Thus, for example, Sudden Stops might be displayed in models in which the equilibrium set does not vary continuously with respect to fundamentals Calvo, Our empirical findings support the view that potential RER fluctuations coupled with DLD are key determinants of the probability of experiencing Sudden Stops, thus highlighting the relevance of potential balance-sheet effects in explaining the likelihood of a crisis. As will be discussed later, we argue that potential changes in the RER are linked to the size of the current account deficit prevailing before the materialization of a Sudden Stop. Thus, our approach focuses on the impact of dollarization on the likelihood of a Sudden Stop, rather than on the consequences of dollarization and Sudden Stops on relevant variables such as economic growth, as in Edwards , for example. Recent empirical literature has focused on alternative measures of crisis, whether currency crises Frankel and Rose, ;6 Kaminsky and Reinhart, ;7 Edwards, ;8 5 In contrast to DLD, foreign liability dollarization i. However, we believe that to the extent that many of the recent crises originated in credit shocks in international markets, as argued in Calvo , measures of crisis should be more closely linked to large and unexpected capital account movements rather than to measures that focus on large nominal currency fluctuations or current account reversals. Besides, current account and exchange rate behavior may be more affected by policy choices than Sudden Stops. Moreover, Sudden Stops may imply quite different timings for the onset of a crisis compared to exchange rate crises or current account reversals. Furthermore, we do not focus on the current account itself, but rather on the percentage fall in the absorption of tradable goods, which, as will be argued later, may represent a summary statistic for the rise in the RER following a Sudden Stop. Moreover, we highlight DLD, a phenomenon not considered in previous empirical studies of crises, with the exception of Arteta , who explores the significance of Liability Dollarization in explaining the probability of a currency crisis. Interestingly, he finds no significant role for Liability Dollarization. This result is not incompatible with our findings, given that we do not focus on currency crises, and, as stated earlier, the timing of currency crises may be quite different from that of Sudden Stops. Additionally, our measure of dollarization is different in that it includes not only deposits but also foreign borrowing, something that is particularly relevant for EMs when trying to proxy for credit awarded in foreign currency. Section 2 describes a model that identifies the variables that determine the change in the RER, which is at the heart of our crisis framework. Section 3 develops an empirical definition and characterization of Sudden Stops. Section 4 focuses on an empirical analysis of the determinants of Sudden Stops, following a panel Probit 7 Kaminsky and Reinhart implicitly introduce a link between current account performance and currency crises by incorporating the growth rate of imports and exports in their analysis. They select the latter as a relevant early warning indicator of currency crises based on the noise-to-signal ratio properties of the series. Section 5 concludes with a description of our main findings and future lines of research. Given that the accumulation of foreign assets is determined by trade balance performance, the current exchange rate depends on both the path of money supply and the path of the trade balance. Shocks to the latter with sufficient persistence can therefore have effects on the spot exchange rate. We focus instead on shocks to the financing of the current account. An excellent summary of the different views on the current account can be found in Edwards Shocks to collateral requirements, or to the terms of trade, can lead to substantial overshooting of the RER, as the value of assets used as collateral may overshoot downwards due to inefficient production levels when credit constraints bind following an external shock. Now consider a Sudden Stop episode. Typically, prior to these episodes the CAD is positive, and as a result of the Sudden Stop it goes down to zero, or even runs into negative territory this is documented in Calvo and Reinhart, , for EMs, and in Calvo, Izquierdo and Talvi, , for Latin American countries following the Russian crisis. Moreover, it is worth noting that these are not common events. As shown in Appendix Table 1, as a general rule, changes in the trade balance display substantial persistence

when the latter is approximated by an AR 1 process, both for EMs and developed economies. Reserves losses could momentarily cushion the blow, but as the Sudden Stop phenomenon lingers on, international reserves will be depleted. Actually, that is the general rule in Sudden Stop episodes that are accompanied by a balance-of-payments crisis which will be the focus of our empirical analysis. Thus, as a first approximation, we will center on the case in which the CAD is driven down to zero. Changes in the trade balance are approximated by a first-order autoregressive AR 1 process. On average, the estimated coefficient yields 0. For convenience, we drop the time subscript in the equations that follow. This equation is not intended to model the actual change in the equilibrium real exchange rate but, rather, that part of the total change that is likely to be very difficult for the country to prevent. A debtor country could stop paying its debt, but, as a general rule, it cannot force new money from its creditors. That is the assumption behind equation 5. We are now ready to complete the framework that will help to rationalize Sudden Stops as defined in the empirical section, containing a largely unexpected component. Consider a scenario in which a shock is spread from one country to other regions because of prevailing rules in capital market transactions such as margin calls that are unrelated to country fundamentals. Such a possibility is discussed in Calvo , where it is argued that a liquidity shock to informed investors due to adverse developments in one country¹⁸ may trigger sales of assets from other countries in their portfolio in order to restore liquidity. Now add to this framework a set of uninformed investors who face a signal-extraction problem in that they cannot observe whether sales of the informed are motivated by lower returns on projects or by the informed facing margin calls. Thus, if the relative change in RER is large and the economy is liability-dollarized, then massive bankruptcy will likely ensue, and the economy will land in a bad equilibrium characterized by a Sudden Stop with output contraction and low debt repayment capacity. The latter can be rationalized in different ways. For example, although they do not deal with bankruptcies, models such as Izquierdo or Arellano and Mendoza help rationalize the effects of changes in the RER on output via credit contraction, where the relevant price is that of non-tradable collateral relative to the tradable good being produced. Aghion, 18 Say, a margin call due to the fall in the price of asset holdings from a particular country. This can occur when the variance of returns to projects is sufficiently high relative to the variance of the liquidity shock of informed investors. The associated fall in future money demand and consequent future currency depreciation, coupled with arbitrage in the foreign exchange rate market, implies that currency depreciation must take place in the current period as well, opening the door for expectational shocks that could push an economy into a bad low output equilibrium. This is the central conjecture that will be put to the test in the next sections. The simple theory outlined above stresses the possibility that a current account deficit a proxy of unavoidable current account adjustment when the country is tested by the capital market combined with Liability Dollarization will bring about objective conditions that generate a Sudden Stop. Notice that in this context the stock of debt is, in principle, not central, unless one can argue that it changes the size of the unavoidable current account adjustment when the country is tested. This point is worth keeping in mind because our empirical results suggest that total debt is not a key factor behind Sudden Stop. On the other hand, once a Sudden Stop occurs, how long financial turmoil will last should quite sensibly be expected to depend on total debt, a phenomenon that appears to be supported in part by the data. A Note on Models Sudden Stops could be rationalized in terms of models displaying a unique equilibrium. It may suffice that the equilibrium outcome be a discontinuous function of fundamentals. This feature could actually be derived in conventional models in the presence of externalities, where if more than one equilibrium were to be displayed, uniqueness is recovered by assuming, for example, that the best equilibrium will be chosen a Panglossian assumption In Calvo , there exists a critical level of government debt beyond which the economy plunges into a bad equilibrium. The transition from the good to the bad equilibrium displays Sudden Stop features. Although the model assumes perfect foresight, it could be used to depict a situation in which the economy is hit by a totally unexpected shock that pushes it into the bad equilibrium. Thus, this model does not rely on equilibrium multiplicity, but it nonetheless provides some insight on a possible cause of a Sudden Stop, namely, public sector indebtedness.

Chapter 2 : EconPapers: On the empirics of Sudden Stops: the relevance of balance-sheet effects

Summary -On the empirics of sudden stops: the relevance of balance sheet effects. the case of 12 emerging central and eastern european economies. student: valeria bir Åf u coordinator: professor mois Åf altÅfr, phd buc harest - july

According to Milgrom and Roberts Capital controls, sudden stops and current account reversals. The role of external factors. Goethe-Universitaet Frankfurt Working Coordination risk and the price of debt. Currency crises and uncertainty about fundamentals. Does openness to trade make countries more vulnerable to sudden stops, or less? Explaining sudden stop, growth collapse and bop crises - the case of distortionary output taxes. Financial Policies and the World Capital Market: The Problem of Latin American Countries, Global games and equilibrium selection. The Capital Flight Problem. On the empirics of sudden stops: Public information, private information, and the multiplicity of equilibria in coordination games. Rationalizability, learning and equilibrium in games with strategic complementarities. Sudden stops and imf-supported programs. Sudden stops and the mexican wave: External Financial Vulnerability and Preventive Policies. Eight Annual conference of the Central Bank of Chile. World market integration through the lens of foreign direct investors. Policy Research Working Paper No.

Chapter 3 : on the empirics of sudden stops: the relevance of balance-sheet effects by IDB - Issuu

Downloadable! Using a sample of 32 developed and developing countries we analyze the empirical characteristics of sudden stops in capital flows and the relevance of balance sheet effects in the likelihood of their materialization.

Economic impact[edit] The balance of payments identity establishes that the current account is equal to the capital account plus the accumulation of international reserves. A reduction in the current account deficit is achieved through a decrease in domestic aggregate demand for tradable goods. Since tradable and non-tradable goods are complements, this also reduces demand for non-tradable goods. The demand for tradable goods reflects in a reduction in imports; however, the lower demand for non-tradable goods translates into lower output and real depreciation of the currency lower relative price of non tradable to tradable goods. Firms producing non-tradable goods face an increase in the real cost of financing, as the cost of loans in terms of the price of non-tradable goods rises. These firms get lower revenues, which reduce their ability to repay their loans. As a result, banks face a higher rate of non-performing loans from this sector. In this situation, banks become more cautious and decrease loans, which worsens the economic recession. A collapse in asset prices also contributes to a sharp slowdown in economic activity. The value of loan collaterals are severely reduced which further impacts the situation of the financial system and reduces credit, reflecting in lower consumption and investment. Furthermore, lower asset prices have negative wealth effects for consumers, which further reduce consumption spending. The features of sudden stops are similar to those of balance of payment crises in terms of devaluations of the domestic currency followed by periods of output loss. However, sudden stops are characterized by sharper recessions and a larger fall in the price of non-tradable to tradable goods. A similar argument relates large changes in relative prices of tradable and non-tradable goods with the effects of a sudden stop. Therefore, a higher proportion of foreign currency debt increases the vulnerability to currency devaluations. Different to first generation crisis models, in their model crises may occur even under low unemployment and sound fiscal policies. An additional effect of sudden stops and third generation crises in emerging markets are related to financial institutions and sudden stops in short term capital inflows, in comparison to previous crises where the main features were related to fiscal imbalances or weakness in real activity. Due to the inherent structure of the banking system, banks transform maturity from liquid deposits to illiquid assets , which creates vulnerability to bank runs. Even in situations where banks might be solvent , in the short run bank runs create an illiquidity problem, where banks would need to borrow funds to meet the temporary deposit withdrawals. However, under this situation, it might be harder to obtain foreign funds, as foreign creditors may also panic depending on the degree of commitment to repay international debts. Moreover, the higher the level of short term debt the higher the exposure to illiquidity problems. This models is particularly related to the situation in emerging markets, because of the larger role of banks compared to other financial institutions in these economies and because it is more difficult for them to get emergency funds from world markets during crisis periods. An alternative explanation of sudden stops focuses on the interaction of temporary and permanent technology shocks, where highly volatile trend shocks in emerging market economies are closely related to sudden stop episodes. The sharp effects of sudden stop episodes are not only related to the large magnitude of the shock, but also to the fact that there is a negative productivity shock with a change in trend. In order to study sudden stop episodes, using data from the economic crisis in Mexico , this model decomposes it to obtain a representation of transitory and permanent technology shocks. The results show that including permanent technology shocks is able to produce the behavior observed during a sudden stop episode. The model predicts a large contraction in output, consumption and investment, as well as a sharp current account reversal. Empirical issues[edit] Empirical studies mention a group of indicators that may be related to sudden stops. The composition of capital inflows, with a higher proportion of short term financing may be more risky as they generate larger slowdowns in capital inflows. The time profile of maturity debt is important in assessing the potential for sudden reversals in capital flows. Emerging markets Some empirical studies focus on the interaction between sudden stops and financial crises in emerging market economies. The severity of sudden stop episodes in emerging market economies are compared using indicators

such as the real depreciation of the currency and indicators of currency and banking crises. Results suggest that currency and banking crises in Asia were more severe than the sharpest crises in Latin America, in terms of banking bailout costs and the size of capital account reversal. Another topic of study is the impact of sudden stops on output. Empirical studies show that the effects of a banking crisis are more pernicious than the effects of a currency crisis, due to the additional effect of the credit channel on output. Lower asset prices are a persistent fact after a banking crisis, which indicate a low value of collaterals to loans, and therefore, negatively impact the banking sector and the supply of loans. Regarding exports, currency crises show a faster recovery in the export sector, while exports remain low for an average of two years after banking crises. Banking crises also present a sharper recession, consistent with the disruption of the financial sector. There is a distinguishable boom–bust cycle, as unsustainable massive capital inflows that precede a sudden stop episode sharply increase economic activity. Emerging markets and advanced economies Other studies focus on the relationship between current account reversals and sudden stops in both emerging markets and advanced economies. The less-than-one relationship could be related to an effective use of international reserves to offset capital outflows during sudden stops, while during current account reversals, there are some countries that were not receiving large capital inflows, so their deficits were financed through a loss of international reserves. A comparison of the stylized facts observed during sudden stop episodes in emerging market economies and developed countries on the financial crises of the s [4] relate sudden stops in emerging market and advanced economies with the presence of contagion effects. Most sudden stop episodes for emerging markets occur around the Tequila , East Asian and Russian crises. The nominal exchange rate behavior during most sudden stop episodes show that sudden stops in emerging markets are followed by a devaluation of the domestic currency, while most depreciation episodes in developed countries are not related to sudden stop phases. Real interest rates sharply increase during sudden stop episodes, especially in the case of emerging market economies. A sharp loss of international reserves is also observed during sudden stop episodes, both in developed countries and emerging markets. The current account balance shows a sharp reduction in current account deficits, with a significantly higher increase in the current account balance in emerging markets.

Chapter 4 : EconStor: On the Empirics of Sudden Stops: The Relevance of Balance-Sheet Effects

On the Empirics of Sudden Stops: The Relevance of Balance-Sheet Effects Guillermo A. Calvo, Alejandro Izquierdo, and Luis-Fernando Mejía NBER Working Paper No. May JEL No. F31, F32, F34, F41 ABSTRACT Using a sample of 32 developed and developing countries we analyze the empirical characteristics of sudden stops in capital flows and.

Chapter 5 : On the Empirics of Sudden Stops: The Relevance of Balance-Sheet Effects

Guillermo A. Calvo & Alejandro Izquierdo & Luis Fernando Mejía-a, "On the Empirics of Sudden Stops: The Relevance of Balance-Sheet Effects," Research Department Publications , Inter-American Development Bank, Research Department.

Chapter 6 : On the empirics of Sudden Stops: the relevance of balance-sheet effects - CORE

Using a sample of 32 developed and developing countries we analyze the empirical characteristics of Sudden Stops in capital flows and the relevance of balance sheet effects in the likelihood of.

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